

Figure 1

OLF1	MEFTD-RMYT	-LVTEFILLG	FPTRPELQIV	LFLMFLTYA	ILLIGNIGLM	LLIRIDPHLO
OLF2	M---D---MQS	S-TPGFLLLG	FSEHPGLGRT	LFVDVITSYL	LTLVGWTLTI	LLSALDTRKH
OLF3	MG-TD---MOT	-WVSEFILLG	LSSDWDTRVS	LFVLFLVMYV	VTVLGNCLIV	LLIRLDSRLH
14-1	M---DSLNGT	-RVTEFVFLG	LTDNRVLEML	FEMAFSAIYM	LTLSGNLTII	IATVFTPSLH
14-2	MEEAILLNOT	SLVTFERLRG	LSVNHKARIA	MFSMFLIPYV	LTLIGNVLIV	ITIIYDHRLLH
	*	*	*	*	**	*
OLF1	TPMYFFLSNL	SFVDCYFSD	IVPKMLVNFL	SENKSIITYG	CALQFYFFCT	FADTESILLA
OLF2	SPMYFFLSNL	SFLDLCTTS	CVPOMLANLW	GPKKTISFLD	CSVQIFIFLS	LGTECELMK
OLF3	TPMYFFLTNL	SLVDVSYATS	VVPQLLAHFL	AEHKALPPOS	CAAQLEYSLA	LGGEFVILLA
14-1	TPMYFFLSNL	SFIDICHSSV	TVPKMLEGLL	LERKTISPDN	CITQLEFLHL	FACAEIFLLI
14-2	TPMYFFLSNL	SFIDVCHSTV	TVPKMLRDVW	SEKRLISFDA	CVTOMEFLHL	FACTRIEFLT
	*****	**	*	*	*	*
OLF1	AMAYDRYVAI	CNPELYTVVM	SRGICMRLIV	LSYLGCNMSS	LVHTSPAFIL	KYCDKNVINH
OLF2	VMAFDRYVAV	COPLHYATII	HPRLCQWLAS	VAWVIGLVGS	VVQTPSTLHL	PFCDPQVDD
OLF3	VMAFDRYVAV	CDALRYSAIM	HGGLCARLAI	TSWVSGFISS	PVQTAITFQL	PMCRNKPIDH
14-1	IVAYDRYVAI	CTPLHYPNVM	NMRVCIQLVF	ALWLGGTVHS	LGQFTLTIRL	PYCGPNIIDS
14-2	VMAFDRYVAI	CKPLOYMIVM	NWKVCVLLAV	ALWTGGTIHS	IALTSLTIKL	PYCGPDEIDN
	**	*****	*	*	*	*
OLF1	FFCDLPPLLK	LSCTDTTINE	WLLSTYGSSV	EIICFIIIII	SYFFILLSVL	KIRSFSGRKK
OLF2	FVCEVPALIR	LSCEDTSYNE	IQVAVASVFI	LUVPLSLILV	SYGAITWAVL	RINSATAWRK
OLF3	ISCELLAVVR	LACVDTSSNE	VTIMVSSIVL	LMTPLCLVLL	SYIQIISTIL	KIQSREGRRK
14-1	YFCDVPLVIK	LACTDTYLTG	ILIVTNSGTI	SLSCFLAVVT	SYMVIL-VSL	RKHSAGROK
14-2	FFCDVPPVIK	LACIDTPISL	ILIVSNSGLI	SVVCFVVLV	SYAVIL-VSL	ROQISKGKWK
	*	****	*	*	**	*
OLF1	TFSTCASHLT	SVTIYOGTIL	FIYSRPSYLY	SPNTDKIISV	PYTIPTPLVN	PLIYSLRNKD
OLF2	AFGTCCSHLT	VVTLFYSSVI	AVYLOPKNPY	AQGRGKFEGL	FYAVGTPLSN	PLVYTLRNKE
OLF3	AFHTCASHLT	VVALCYGVAI	FTYIQPHSSP	SVLQEKLFVS	FYAILTPMLN	PMIYSLRNKE
14-1	ALSTCSAHFM	VVALFFGPCI	FIYTRPDTSF	SI--DKVSV	PYTVVTPPLN	PFIYTLRNEE
14-2	ALSTCAHHLT	VVTLFLGHCI	FIYSRPSTSL	PE--DKAVSV	FFTAVTPLLN	PFIYTLRNEE
	*	*	*	*	**	*
OLF1	VKDAAEKVLR	SKVDS--S				
OLF2	IKRALRRRLG	KERDSRESWR	AA			
OLF3	VKGAWQKLLW	KFSG-LTSKL	AT			
14-1	VKSAMKQLRO	QOVF-FT-KS	YT			
14-2	MKSALNKLVG	RK-E-R--KE	EK			
	*	*	*	*	*	*

Figure 2

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OLF1 MEFTD-RNYT LVTEFTLLGF PTRPELQIVL FLMFLTLYAI ILIGNIGEME LIRIDPHLQ-
OLF2 M---D--MOS STPGFLLLGF SEHPGLGRTL FVDVITSYLL TLVGNTLLIL LSALDTKLH-
OLF3 MG-TD--NOT WVSEFILLGL SSDWDTRVSL FVLFLVMYV TVLGNCLIVE LIRLDSRLH-
14-3 ME-RI--NST LLTAFILTGI PYPLRELTLY FVFFFLIYIL TOLGNLLILI TVWADPRLHA
      *      *      * * *      *      *      **      * *
OLF1 TPNYFFLSNL SFVCLCYFSD IVPKMLVNL SENKSISYYG CALQFYFFCT PADTESFILA
OLF2 SPNYFFLSNL SFLDLCTTS CVPQMLANLW GPKRTISFLD CSVOIFIFLS LGTTECILMK
OLF3 TPNYFFLTNL SLVDVSYATS VVPQLLAHPL AEHKAIPFQS CAAOLFESLA LGGTEFVELA
14-3 RPNYIFLGVL SVIDMSISSI IVPRLMNT LGVKPIPFEG CVAQLYFYHF LGSTOCFLYT
      *** * *      * *      **      * *      * *
OLF1 AMAYDRIVAI CNPLLYTVVM SRGICMLIV LSYLGGNMSS LVHTSFAPIL KYCDKNVINH
OLF2 VMAFDRIVAV COPLHYATII HPRLCWOLAS VAWVIGLVGS VVQTPSTLHL PFCPDROVDD
OLF3 VMAYDRIVAV CDALRYSAIM HGGLCARLAI TSWVSGFISS PVQTAITPOL PMCRNKFIDH
14-3 LMAFDRYLAI COPLRYPVLM TAKLSALLVA GAWMAGSIHG ALQAILTFRL PYCGPNOVDY
      ** * * *      * * *      *      *      *
OLF1 FFCDLPPLLK LSCTDTTINE WLLSTYGSSV EIICFIIIII SYFFILLSVL KIRSFSGRKK
OLF2 FVCEVPALIR LSCEDTSYNE IOVAVASVFI LVVPLSLILV SYGAIWAVL RINSATAWRK
OLF3 ISCELLAVVR LACVDTSSNE VTIMVSSIVL LMTPLCLVLL SYIQIISTIL KIQSREGRKK
14-3 FFCDIPAVLR LACADTTVNE LVTFVDIGVV VASCFSLLIL SYIQIQAAIL RIHTADGRRR
      *      * * * * *      *      *      *      *
OLF1 TFSTCASHLT SVTIYQGTL FIYSRPSYLY SPNTDKIISV FYTIFIPVEN PLIYSLRNKD
OLF2 AFGTCSSHLT VVTLFYSSVI AVYLOPKNPY AQGRGKFFGL FYAVGTPSLN PLVYTLRNKE
OLF3 AFHTCASHLT VVALCYGVAI FTYIQPHSSP SVLQEKLSV FYAILTPMEN PMIYSLRNKE
14-3 AFSTCGAHVT VVTVYVPCA FIYLRPETNS PLD-GAAALV PTAI-TPPLN PLIYTLRNKE
      * * * * *      * *      * * * * *
OLF1 VKDAAEKVL- -RSKVDSS
OLF2 IKRALRRILG KERDSRESWR AA
OLF3 VKGAWOKLLW KFSGL-TSKL AT
14-3 VKLAL-KRM- LRSPTPSEV
      * *      *

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Figure 3

OLF1 MEETD-RMYT -LVTEFILLG PPTRPELOIV LFLMFLTYA IILIGNIGLM ELIRIDPHEQ  
 OLF2 M---DMQS-- S-TPGFILLG FSEHPGLGRT LFVDVITSYL LTLVGNLITI LLSALDTKLH  
 OLF3 MG-TDMQT-- -WSEFILLG LSSDHDTRVS LFLVFLVMYV VTVLGNCLIV ELIRLDSRLH  
 14-4 MGKTKMTSLD TVVRDFILLG LSHPPNIRSL LFLVFFVIYI LTOLGNLLIL LTVWADPKLR  
 14-5 MGKTKMTSLD AVVTDFILLG LSHPPNLRSL LFLVFFIYI LTOLGNLLIL LTMWADPKLC  
 \* \* \* \* \*  
 OLF1 T-PMYFFLSN LSFVLCYFS DIVPKMLVNE LSENKSISYV GCALQYFFC TPADTESFIL  
 OLF2 S-PMYFFLSN LSFIDLCPFT SCVPQMLANL WGPKKTIISYL DCSVQIFIEL SIGTTECIIM  
 OLF3 T-PMYFFLTN LSLVDVSYAT SVVPQLLAHF LAEHKAIPFO SCARQLEPFL ALGGIEFVLL  
 14-4 ARPMYILLGV LSFIDMWLSS VIVP\*LILNF TPANKAIPFG GCVAQLYFFH FLGSTQCTLY  
 14-5 ARPMYILLGV LSFIDMWLSS VIVPRLILDF TPSIKAIPFG GCVAQLYFFH FLGSTQCTLY  
 \*\*\* \* \*\* \* \* \*  
 OLF1 AAMAYDRIYA ICNPLLYTVV MSRGICMRI VLSYLGGMMS SLVHTSFAFI LKYCDKNVIN  
 OLF2 KVMAFDRIYA VCOPLHYATI IHPRLCWOLA SVANVIGLVG SVVQTPSTLH LPFCPDROVD  
 OLF3 AVMAFDRIYA VCDALRYSAI MHGGLCARLA ITSWSGFIS SPVQTAITFO LPMCRNKFID  
 14-4 TLMAYDRIYA ICQPLRYPVL MNGRLCTVLV AGAWVAGSMH GSIQATLTFR LPYCGPNQVD  
 14-5 TLMAYDRIYA ICQPLHYVVL MNGRLCTVLV AGAWVAGSMH GSIQATLTFR LPYCGPNQVD  
 \* \* \* \* \*  
 OLF1 HFTCDLPPIL KLSCTDTTIN EWLLSTYGSS VEIICFIIII ISYFFILLSV LKIRSFSGRK  
 OLF2 DFVCEVPALI RISCEDTSYN EIOVAVASVF ILVVPLSLIL VSYGAIWAV LRINSATAMR  
 OLF3 HISCELLAVV RIACVDTSN EVTIMVSSIV LMTPCLVLE LSYIQIISTE LKIQSREGRK  
 14-4 YFICDIPAVL RIACADTTVN ELVTFVDIGV VAASCPMLIL LSYANIVNAI LKIRTTDGRR  
 14-5 YFICDIRAVL RIACADTTVN ELVTFVDVRV VAASCPMLIL LSYANIVHAI LKIRTTDGRR  
 \* \* \* \* \*  
 OLF1 KTFSTCASHL TSVTIYQGTI LFIYSRPSYL YSPNTDKIIS VFYTFIPVL NPLIYSLRNM  
 OLF2 KAFGTCSHL TVVTLFYSSV IAVYLOPKNP YAGRGKFFG LFYAVGTSL NPLVYTLRNM  
 OLF3 KAFBTCASHL TVVALCYGVA IFTYIOPHSS PSVLOEKLFV VFYAILTPML NPMIYSLRNM  
 14-4 RAFSTCGSHL IVVTYVYVPC IFIYLRAGSK G-PLDG-AAA VFYTVVTELL NPLIYTLRNO  
 14-5 RAFSTCGSHL IVVTYVYVPC IFIYLRAGSK D-PLDG-AAA VFYTVVTELL NPLIYTLRNO  
 \* \* \* \* \*  
 OLF1 DVKDAAEKVLR SKVDS--S  
 OLF2 EIKRALRRLLG KERDSRESWR AA  
 OLF3 EVKGAWOKLEW KFSG-LTSKL AT  
 14-4 EVKSAL-KRI- -TAGQTE  
 14-5 EVKSAL-KRI- -TAG

Figure 4

1    ATGGACAGTC TAAACCAAAC AAGAGTGACT GAATTTGTCT TCTTGGGACT  
51    CACTGATAAC CGGGTGCTGG AAATGCTGTT TTTCATGGCA TTCTCAGCCA  
101   TTTATATGCT AACGCTTTCA GGGAACATTC TCATCATCAT TGCCACAGTC  
151   TTTACTCCAA GTCTCCATAC CCCCATGTAT TTCTTCCTGA GCAATCTGTC  
201   CTTTATTGAC ATCTGCCACT CATCTGTCAC TGTGCCTAAG ATGTTGGAGG  
251   GTTTGCTTTT AGAAAGAAAG ACCATTTCTT TTGACAACTG CATCACACAG  
301   CTCCTTCTCC TACATCTCTT TGCCTGTGCC GAGATCTTTC TGCTGATCAT  
351   TGTGGCGTAT GATCGTTACG TGGCTATCTG CACTCCACTC CACTACCCCA  
401   ATGTGATGAA CATGAGAGTC TGTATACAGC TTGTCCTTTC TCTCTGGTTG  
451   GGGGGTACTG TTCACTCACT AGGGCAGACC TTCTTGACTA TTCGTCTACC  
501   TTACTGTGGC CCCAACATTA TTGACAGCTA CTTCTGTGAT GTGCCTCTTG  
551   TTATCAAGCT GGCCTGCACA GATACATACC TCACAGGAAT ACTGATTGTG  
601   ACCAATAGTG GAACCATCTC CCTCTCCTGT TTCTTGCCCG TGGTCACCTC  
651   CTATATGGTC ATCCTGGTTT CTCTTCGAAA AACTCAGCT GAAGGGCGCC  
701   AGAAAGCCCT GTCTACCTGC TCGGCCCACT TCATGGTGGT TGCCCTCTTC  
751   TTTGGGCCAT GTATCTTCAT CTATACTCGG CCAGACACCA GCTTCTCCAT  
801   TGACAAGGTG GTGTCTGTCT TCTACACAGT GGTCACCCCT TTGCTGAATC  
851   CCTTCATTTA CACCTTGAGG AATGAGGAGG TAAAAAGTGC CATGAAGCAG  
901   CTCAGGCAGA GACAAGTTTT TTTCACGAAA TCATATACAT AA

Figure 5

1    ATGGAAAGAA TCAACAGCAC ACTGTTGACT GCGTTTATCC TGACAGGAAT  
51    TCCGTATCCA CTCAGGCTAA GGACACTCTT TTTTGTGTTC TTTTTTCTAA  
101   TCTACATCCT GACTCAGCTG GGAAACCTGC TTATTTTAAT CACTGTCTGG  
151   GCAGACCCAA GGCTCCATGC CCGCCCCATG TACATCTTTC TTGGTGTCT  
201   CTCAGTCATT GATATGAGCA TCTCCTCCAT CATTGTCCCT CGCCTCATGA  
251   TGAAC TTCAC TTTAGGTGTC AAACCCATCC CATTGGGTGG CTGTGTTGCT  
301   CAACTCTATT TCTATCACTT CCTGGGCAGC ACCCAGTGCT TCCTCTACAC  
351   CCTAATGGCC TATGACAGGT ACCTGGCAAT ATGTCAGCCC CTGCGCTACC  
401   CTGTGCTCAT GACTGCTAAG CTGAGCGCCT TGCTTGTGGC TGGAGCCTGG  
451   ATGGCAGGAT CCATCCATGG GGCTCTCCAG GCCATCCTAA CCTTCCGCCT  
501   GCCCTACTGT GGGCCCAATC AGGTGGATTA CTTCTTCTGT GACATCCCTG  
551   CAGTGTTGAG ACTGGCCTGT GCTGACACAA CAGTCAACGA GCTGGTGACG  
601   TTTGTAGACA TTGGGGTGGT GGTTGCCAGT TGCTTCTCCC TGATCCTCCT  
651   CTCCTACATA CAGATCATTC AGGCCATCCT GAGAATCCAC ACAGCTGATG  
701   GGC GCGCCG GGCTTTTTCA ACTTGTGGAG CCCATGTAAC CGTGGTCACC  
751   GTGTACTATG TGCCCTGTGC CTTATCTAC CTGAGGCCTG AAACCAACAG  
801   CCCCTGGAT GGGGCAGCTG CCCTAGTCCC CACGGCCATC ACTCCTTTCC  
851   TCAACCCCT TATCTACACT CTGCGGAACC AAGAGGTGAA GCTGGCCCTG  
901   AAAAGAATGC TCAGAAGCCC AAGAACTCCG AGTGAGGTTT GA

←

Figure 6

1    ATGGGAAAGA CCAAAAACAC ATCGCTGGAT GCCGTGGTGA CAGATTTTCAT  
51    TCTTCTGGGT TTGTCTCACC CCCCAAATCT AAGAAGCCTC CTCTTCCTGG  
101   TCTTCTTCAT CATTTACATC CTCACTCAGC TGGGGAACCT GCTCATTCTG  
151   CTCACCATGT GGGCTGACCC GAAGCTCTGT GCTCGCCCCA TGTACATTCT  
201   TCTGGGAGTG CTCTCATTCC TGGACATGTG GCTCTCCTCA GTCACCGTTC  
251   CTCGGCTTAT TTTGGATTTT ACTCCTTCCA TCAAGGCTAT CCCGTTTGGT  
301   GGCTGTGTGG CTCAACTGTA TTTCTTTCAC TTCCTGGGCA GCACCCAGTG  
351   CTTCTCTAC ACCTTGATGG CCTATGACAG GTACCTAGCA ATATGTCAGC  
401   CCCTGCACTA CCCAGTGCTC ATGAATGGGA GGTATGCAC AGTCCTTGTG  
451   GCTGGAGCTT GGGTCGCCGG CTCCATGCAT GGGTCTATCC AGGCCACCTT  
501   GACCTTCCGC CTGCCCTACT GTGGGCCCAA TCAGGTGGAT TACTTTATCT  
551   GTGACATCCG CGCAGTATTG AGACTGGCCT GTGCTGACAC AACTGTCAAT  
601   GAGCTTGTGA CCTTTGTGGA CGTCAGGGTA GTGGCCGCCA GTTGCTTCAT  
651   GTTAATTCTG CTCTCCTATG CCAACATAGT CCATGCCATC CTGAAGATAC  
701   GCACCGCTGA TGGGAGGCGC CGGGCCTTCT CCACCTGTGG CTCCCACCTA  
751   ATCGTGGTCA CAGTCTACTA TGTCCCCTGT ATTTTCATCT ACCTTAGGGC  
801   TGGCTCCAAA GACCCCCTGG ATGGGGCAGC GGCTGTGTTT TAACTGTGTG  
851   TCACTCCATT ACTGAACCCC CTCATCTATA CACTGAGGAA CCAGGAAGTG  
901   AAGTCTGCCC TGAAGAGGAT AACAGCAGGT TGA

←

Figure 7

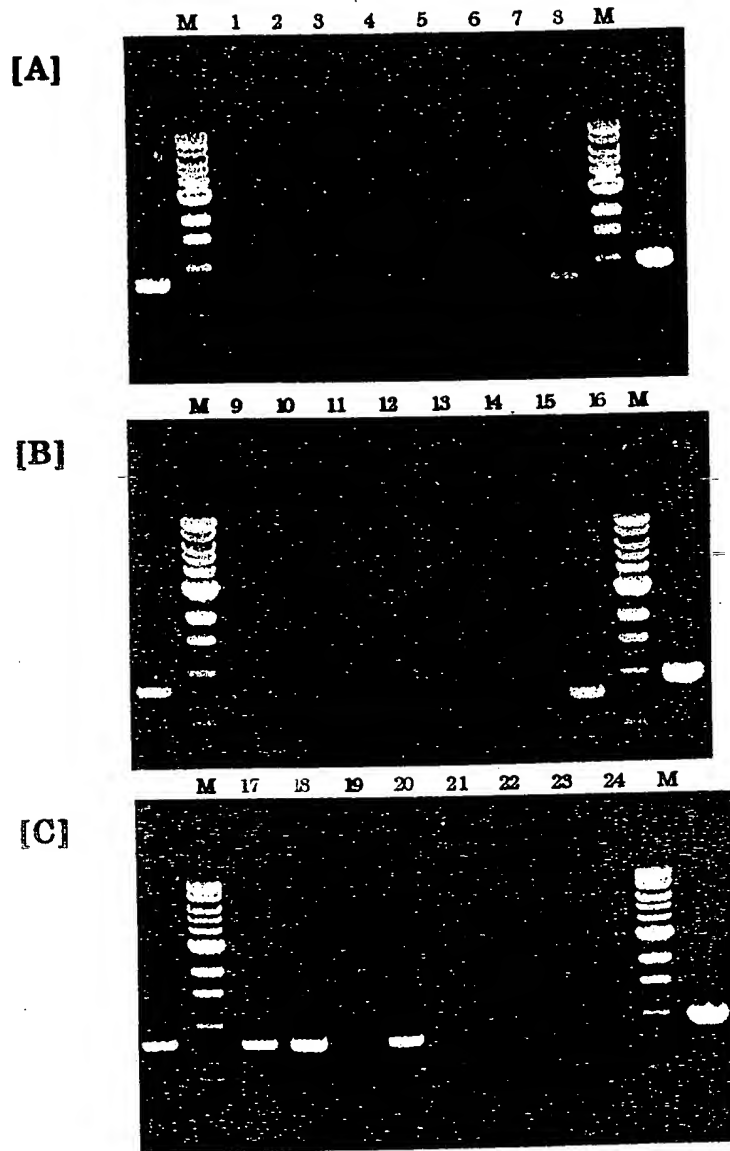
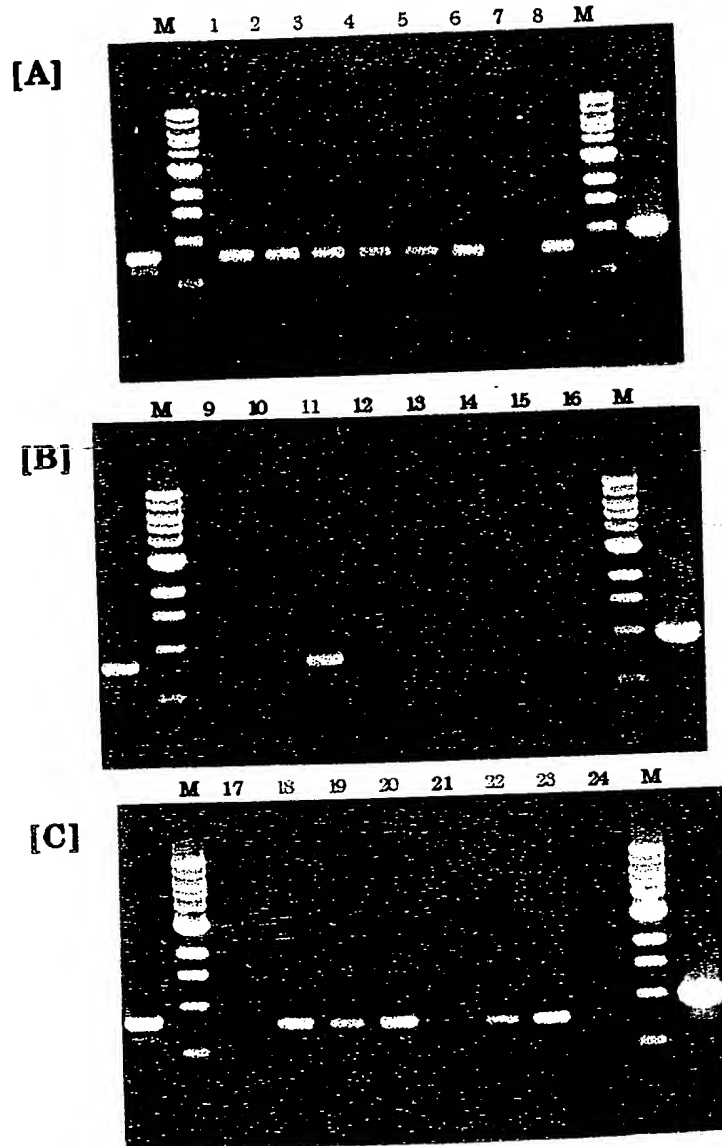


Figure 8





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Figure 9

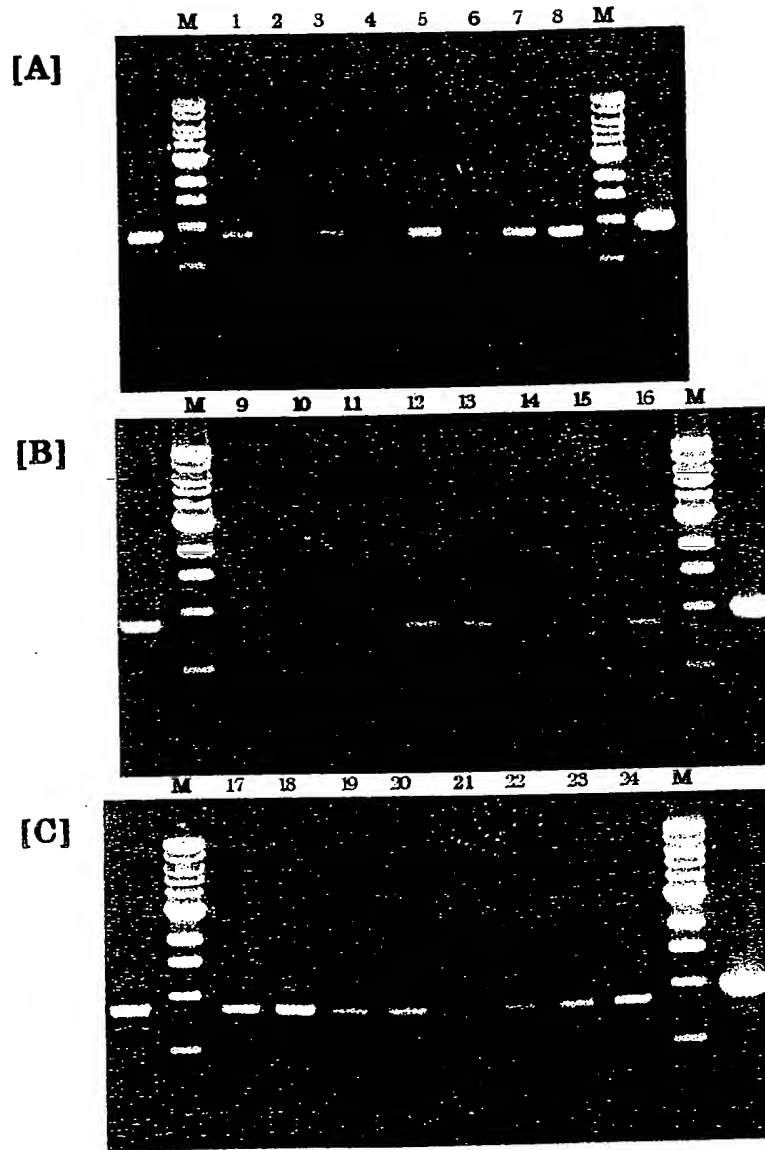


Figure 10

1 CTCATTGAATGGACAGTCTAAACCAAACAAGAGTGAATTTGTCTTCTTGGGACTCA  
MetAspSerLeuAsnGlnThrArgValThrGluPh ValPheLeuGlyLeuThr

61 CTGATAACCGGGTGCTGGAAATGCTGTTTTTCATGGCATTCTCAGCCATTTATATGCTAA  
AspAsnArgValLeuGluMetLeuPhePheMetAlaPheSerAlaIleTyrMetLeuThr  
TM-I

121 CGCTTTCAGGGAACATTCTCATCATCATTGCCACAGTCTTTACTCCAAGTCTCCATACCC  
LeuSerGlyAsnIleLeuIleIleIleAlaThrValPheThrProSerLeuHisThrPro

,181 CCATGTATTTCTCCTGAGCAATCTGTCCTTTATTGACATCTGCCACTCATCTGTCACTG  
MetTyrPhePheLeuSerAsnLeuSerPheIleAspIleCysHisSerSerValThrVal  
TM-II

241 TGCCTAAGATGTTGGAGGGTTTGCTTTTAGAAAGAAAGACCATTTCTTTGACAACTGCA  
ProLysMetLeuGluGlyLeuLeuLeuGluArgLysThrIleSerPheAspAsnCysIle

301 TCACACAGCTCTTCTTCCTACATCTCTTGCCCTGTGCCGAGATCTTTCTGCTGATCATTG  
ThrGlnLeuPhePheLeuHisLeuPheAlaCysAlaGluIlePheLeuLeuIleIleVal  
TM-III

361 TGGCGTATGATCGTTACGTGGCTATCTGCACTCCACTCCACTACCCCAATGTGATGAACA  
AlaTyrAspArgTyrValAlaIleCysThrProLeuHisTyrProAsnValMetAsnMet

421 TGAGAGTCTGTATACAGCTTGTCTTTGCTCTCTGGTTGGGGGGTACTGTTCACTCACTAG  
ArgValCysIleGlnLeuValPheAlaLeuTrpLeuGlyGlyThrValHisSerLeuGly  
TM-IV

481 GGCAGACCTTCTTGACTATTCTGTCTACCTTACTGTGGCCCCAACATTATTGACAGCTACT  
GlnThrPheLeuThrIleArgLeuProTyrCysGlyProAsnIleIleAspSerTyrPhe

541 TCTGTGATGTGCCTCTTGTTATCAAGCTGGCCTGCACAGATACATACCTCACAGGAATAC  
CysAspValProLeuValIleLysLeuAlaCysThrAspThrTyrLeuThrGlyIleLeu

601 TGATTGTGACCAATAGTGGAACCATCTCCCTCTCCTGTTTCTTGGCCGTGGTCACCTCCT  
IleValThrAsnSerGlyThrIleSerLeuSerCysPheLeuAlaValValThrSerTyr  
TM-V

661 ATATGGTCATCCTGGTTTCTCTTCGAAACACTCAGCTGAAGGGCGCCAGAAAGCCCTGT  
MetValIleLeuValSerLeuArgLysHisSerAlaGluGlyArgGlnLysAlaLeuSer

Figure 11

721 CTACCTGCTCGGCCCACTTCATGGTGGTTGCCCTCTTCTTTGGGCCATGTATCTTCATCT  
ThrCysSerAlaHisPheMetValValAlaLeuPhePheGlyProCysIlePheIleTyr  
TM-VI

781 ATACTCGGCCAGACACCAGCTTCTCCATTGACAAGGTGGTGTCTGTCTTCTACACAGTGG  
ThrArgProAspThrSerPheSerIleAspLysValValSerValPheTyrThrValVal

841 TCACCCCTTTGCTGAATCCCTTCATTTACACCTTGAGGAATGAGGAGGTAAAAAGTGCCA  
ThrProLeuLeuAsnProPheIleTyrThrLeuArgAsnGluGluValLysSerAlaMet  
TM-VII

901 TGAAGCAGCTCAGGCAGAGACAAGTTTTTTTACGAAATCATATACATAATGGGCATTGG  
LysGlnLeuArgGlnArgGlnValPhePheThrLysSerTyrThr\*\*\*

961 GATTGCAGACATAATTGCAGCCACATCCTTAATGAAAGAGCAAAAGTAAAGAGTCAAAAT

1021 CAACTTATATAACTTGGTAAATTAGGTAAAATGGCATAGAGCAGGTCAGATTTCTGCTCA

1081 TTAAAGATAAGAACTTATTCTGTTCATTAAAGATAAGAACTTATTAAGTATTATTAAAT

1141 AAA

Figure 12

1 ATTCTCTGGGATATGGAAAGAATCAACAGCACACTGTTGACTGCGTTTATCCTGACAGGA  
MetGluArgIleAsnSerThrLeuLeuThrAlaPheIleLeuThrGly  
61 ATTCCGTATCCACTCAGGCTAAGGACACTCTTTTTTGTGTTCTTTTTTCTAATCTACATC  
IleProTyrProLeuArgLeuArgThrLeuPhePheValPhePhePheLeuIleTyrIle  
121 CTGACTCAGCTGGGAAACCTGCTTATTTTAATCACTGTCTGGGCAGACCCAAGGCTCCAT  
LeuThrGlnLeuGlyAsnLeuLeuIleLeuIleThrValTrpAlaAspProArgLeuHis  
TM-I  
181 GCCCGCCCCATGTACATCTTTCTTGGTGTCTCTCAGTCATTGATATGAGCATCTCCTCC  
AlaArgProMetTyrIlePheLeuGlyValLeuSerValIleAspMetSerIleSerSer  
TM-II  
241 ATCATTGTCCCTCGCCTCATGATGAACCTTCACTTTAGGTGTCAAACCCATCCCATTGTT  
IleIleValProArgLeuMetMetAsnPheThrLeuGlyValLysProIleProPheGly  
301 GGCTGTGTTGCTCAACTCTATTTCTATCACTTCCTGGGCAGCACCCAGTGCTTCCTCTAC  
GlyCysValAlaGlnLeuTyrPheTyrHisPheLeuGlySerThrGlnCysPheLeuTyr  
TM-III  
361 ACCCTAATGGCCTATGACAGGTACCTGGCAATATGTCAGCCCCTGCGCTACCCTGTGCTC  
ThrLeuMetAlaTyrAspArgTyrLeuAlaIleCysGlnProLeuArgTyrProValLeu  
421 ATGACTGCTAAGCTGAGCGCCTTGCTTGTGGCTGGAGCCTGGATGGCAGGATCCATCCAT  
MetThrAlaLysLeuSerAlaLeuLeuValAlaGlyAlaTrpMetAlaGlySerIleHis  
TM-IV  
481 GGGGCTCTCCAGGCCATCCTAACCTTCCGCCTGCCCTACTGTGGGCCCAATCAGGTGGAT  
GlyAlaLeuGlnAlaIleLeuThrPheArgLeuProTyrCysGlyProAsnGlnValAsp  
541 TACTTCTTCTGTGACATCCCTGCAGTGTGAGACTGGCCTGTGCTGACACAACAGTCAAC  
TyrPhePheCysAspIleProAlaValLeuArgLeuAlaCysAlaAspThrThrValAsn  
601 GAGCTGGTGACGTTTGTAGACATTGGGGTGGTGGTTGCCAGTTGCTTCTCCCTGATCCTC  
GluLeuValThrPheValAspIleGlyValValValAlaSerCysPheSerLeuIleLeu  
TM-V  
661 CTCTCCTACATACAGATCATTGAGGCCATCCTGAGAATCCACACAGCTGATGGGCGGCGC  
LeuSerTyrIleGlnIleIleGlnAlaIleLeuArgIleHisThrAlaAspGlyArgArg

Figure 13

721 CGGGCTTTTCAACTTGTGGAGCCCATGTAACCGTGGTCACCGTGTACTATGTGCCCTGT  
ArgAlaPheSerThrCysGlyAlaHisValThrValValThrValTyrTyrValProCys  
TM-VI

781 GCCTTCATCTACCTGAGGCCTGAAACCAACAGCCCCCTGGATGGGGCAGCTGCCCTAGTC  
AlaPheIleTyrLeuArgProGluThrAsnSerProLeuAspGlyAlaAlaAlaLeuVal

841 CCCACGGCCATCACTCCTTTCCTCAACCCCTTATCTACACTCTGCGGAACCAAGAGGTG  
ProThrAlaIleThrProPheLeuAsnProLeuIleTyrThrLeuArgAsnGlnGluVal  
TM-VII

901 AAGCTGGCCCTGAAAAGAATGCTCAGAAGCCCAAGAACTCCGAGTGAGGTTTGAAAGTGT  
LysLeuAlaLeuLysArgMetLeuArgSerProArgThrProSerGluVal\*\*\*

961 CTTTCTCCCACTAGGGAAGCTGCCACAATTAGAATTTATTATAATGTTTAGGCTTCGGTA

1021 ACTTTTTTCTTTCTTCTTGTTTTTCTCTTTTATATAGCCATACTGTATGATCAAACAC

1081 AGTTTAAGGTAAAATACTAACTTTCTAACAGTTCCTTAGTATCCTCTCAAGATAACTCTC

1141 AGCCACTGCAAGAGTAGAGAATGAGACCAAATTCTCACAAACTAAACCACATTAAACAAT

1201 CCAGAAGAAAGAATGCAATAGTGTATTTTCCAATGTCTCAGTAATAAA

Figure 14

1 GGCAACCTAAAAGCAAGCATGGACAGTTCCTTGGTGAATAACCAAAAACAAGATGGAGTC  
61 TCGCTCTGTTGCCCAGGCTGGAGTGTAGTGGCGCCATCTCGGCTCGCTGCGGTCTCCGCC  
121 TCCCGGGTTCAGGCGATTCTCCGGCCTCAGCCTCCCGGTGCGTGGGATTGCAGGAACATA  
181 GAACTAAAGCGAGGTTAATTTCCACAGTGAGAACATGCTCCAGACATCCGAGCACCAGTG  
241 TGGCTCTGGAACTCCACAGATACCACAGGACTAGAAAATAACTGGACAATGGGATGTTC  
301 TATCTTGCCCGAACTGAGGGATATAAAAAGCTCCAAAGACAAAGAAAGTACCATCCACCC  
361 ATCCCAAAAGAAATTATCCTTCCTTCTGAAAATAAGACTGCAAAAAGACATGGGAAAGAC  
MetGlyLysThr  
421 CAAAAACACATCGCTGGATGCCGTGGTGACAGATTTCAATTCTTCTGGGTTTGTCTACCC  
LysAsnThrSerLeuAspAlaValValThrAspPheIleLeuLeuGlyLeuSerHisPro  
481 CCCAAATCTAAGAAGCCTCCTCTTCCTGGTCTTCTTCATCATTACATCCTCACTCAGCT  
ProAsnLeuArgSerLeuLeuPheLeuValPhePheIleIleTyrIleLeuThrGlnLeu  
TM-I  
541 GGGGAACCTGCTCATTCTGCTCACCATGTGGGCTGACCCGAAGCTCTGTGCTCGCCCCAT  
GlyAsnLeuLeuIleLeuLeuThrMetTrpAlaAspProLysLeuCysAlaArgProMet  
601 GTACATTCTTCTGGGAGTGCTCTCATTCTGACATGTGGCTCTCCTCAGTCACCGTTCC  
TyrIleLeuLeuGlyValLeuSerPheLeuAspMetTrpLeuSerSerValThrValPro  
TM-II  
661 TCGGCTTATTTTGGATTTTACTCCTTCCATCAAGGCTATCCCGTTTGGTGGCTGTGTGGC  
ArgLeuIleLeuAspPheThrProSerIleLysAlaIleProPheGlyGlyCysValAla  
721 TCAACTGTATTTCTTTCACTTCCTGGGCAGCACCAGTGCTTCCTCTACACCTTGATGGC  
GlnLeuTyrPhePheHisPheLeuGlySerThrGlnCysPheLeuTyrThrLeuMetAla  
TM-III  
781 CTATGACAGGTACCTAGCAATATGTCAGCCCTGCACTACCCAGTGCTCATGAATGGGAG  
TyrAspArgTyrLeuAlaIleCysGlnProLeuHisTyrProValLeuMetAsnGlyArg  
841 GTTATGCACAGTCCTTGTGGCTGGAGCTTGGGTCGCCGGCTCCATGCATGGGTCTATCCA  
LeuCysThrValLeuValAlaGlyAlaTrpValAlaGlySerMetHisGlySerIleGln  
TM-IV  
901 GGCCACCTTGACCTCCGCTGCCCTACTGTGGGCCCAATCAGGTGGATTACTTTATCTG  
AlaThrLeuThrPheArgLeuProTyrCysGlyProAsnGlnValAspTyrPheIleCys

Figure 15

961 TGACATCCGCGCAGTATTGAGACTGGCCTGTGCTGACACAACTGTCAATGAGCTTGTGAC  
AspIleArgAlaValLeuArgLeuAlaCysAlaAspThrThrValAsnGluLeuValThr

1021 CTTTGTGGACGTCAGGGTAGTGGCCGCCAGTTGCTTCATGTTAATTCTGCTCTCCTATGC  
PheValAspValArgValValAlaAlaSerCysPheMetLeuIleLeuLeuSerTyrAla  
TM-V

1081 CAACATAGTCCATGCCATCCTGAAGATACGCACCGCTGATGGGAGGCGCCGGCCTTCTC  
AsnIleValHisAlaIleLeuLysIleArgThrAlaAspGlyArgArgAlaPheSer

1141 CACCTGTGGCTCCACCTAATCGTGGTCACAGTCTACTATGTCCCCTGTATTTTCATCTA  
ThrCysGlySerHisLeuIleValValThrValTyrTyrValProCysIlePheIleTyr  
TM-VI

1201 CCTTAGGGCTGGCTCCAAAGACCCCCTGGATGGGGCAGCGGCTGTGTTTTACACTGTTGT  
LeuArgAlaGlySerLysAspProLeuAspGlyAlaAlaAlaValPheTyrThrValVal

1261 CACTCCATTACTGAACCCCTCATCTATACACTGAGGAACCAGGAAGTGAAGTCTGCCCT  
ThrProLeuLeuAsnProLeuIleTyrThrLeuArgAsnGlnGluValLysSerAlaLeu  
TM-VII

1321 GAAGAGGATAACAGCAGGTTGAAGGACTGAATGAAAATAAGTAACTACATCTGCATCATT  
LysArgIleThrAlaGly\*\*\*

1381 ATCACTGCCACTCTCTTCAGCTACTGCTGCATGTGACAAATGCCCAATAAA

Figure 16

1 CAGCAGCTTGTCCTTCGTCGATTTCTGCTATTCCCTCTGTCATTACTCCCA  
51 AAATGCTGGTGAACCTCCTAGGAAAGAAGAATACAATCCTTTACTCTGAG  
101 TGCATGGTCCAGCTCTTTTCTTTGTGGTCTTTGTGGTGGCTGAGGGTTA  
151 CCTCCTGACTGCCATGGCATATGATCGCTATGTTGCCATCTGTAGCCCAC  
201 TGCTTTATAATGCGATCATGTCCTCATGGGTCTGCTCACTGCTAGTGCTG  
251 GCTGCCTTCTTCTTGGGCTTTCTCTCTGCCTTGACTCATAACAAGTGCCAT  
301 GATGAAACTGTCCTTTTGCAAATCCCACATTATCAACCATTA CTCTGTG  
351 ATGTTCTTCCCCTCCTCAATCTCTCCTGCTCCAACACACACCTCAATGAG  
401 CTTCTACTTTTATCATTGCGGGGTTTAACACCTTGGTGGCCACCCTAGC



Figure 17

1    CATGGTAGGCAACCTTGGCTTGATCACTCTTTTCGGTCTAAATTCTCACC  
51    TCCACACACCAATGTACTATTTCCCTCTTCAATCTCTCCTTCATTGATCTC  
101    TGTTACTCCTCTGTTTTCACTCCCAAATGCTAATGAACTTTGTGTCAAA  
151    AAAGAATATTATCTCCAATGTTGGGTGCATGACTCGGCTGTTTTCTTTC  
201    TCTTTTTTCGTCATCTCTGAATGTTACATGTTGACCTCAATGGCATATGAT  
251    CGCTATGTGGCCATCTGTAATCCATTGCTGTATAAGGTCACCATGTCCCA  
301    TCAGGTCTGTTCTATGCTCACTTTTGCTGCTTACATAATGGGATTGGCTG  
351    GAGCCACGGCCCACACCGGGTGCATGTTTAGACTCACCTTCTGCAGTGCT  
401    AATATCATTAACCATTACTTGTGTGACATACTCCCCCTCCTCCAGCTTTC  
451    CTGCACCAGCACCTATGTCAACGAGGTGGTTGTTCTCATTTGTTGTGGGTA  
501    CTAATATCACGGTACCCAGTTGTACCATCCTCATTTCTTATGTTTTCATT  
551    GTCACTAGCATTCCTTCATATCAAATCCACTCAAGGAAGATCAAAAGCCTT  
601    CAGTACTTGTAGCTCTCATGTCATTGCTCTGTCTCTG

Figure 18

09/807132

1    CATGGTAGGCAACCTTGGCTTGATCATTCTTTTCGGTCTAAATTCTCACC  
51    TCCACACACCAATGTACTATTTCCCTTCAATCTCTCCTTCATTGATCTC  
101    TGTTACTCCTCTGTTTTCACTCCCAAAATGCTAATGAACCTTGTATCAAA  
151    AAAGAATATTATCTCCTATGTTGGGTGCATGACTCAGCTGTTTTTCTTTTC  
201    TCTTTTTTGTTCATCTCTGAATGCTACATATTGACCTCAATGGCATATGAT  
251    CGCTATGTGGCCATCTGTAATCCATTGCTGTATAAGGTCACCATGTCCCA  
301    TCAGGTCTGTTCTATGCTCACTTTTGCTGCTTACATAATGGGATTGGCTG  
351    GAGCCACGGCCACACCGGGTGCATGCTTAGACTCACCTTCTGCAGTGCT  
401    AATATCATCAACCATTACTTGTGTGACATACTCCCCCTCCTCCAGCTTTC  
451    CTGCACCAGCACCTATGTCAACGAGGTGGTTGTTCTCATTGTTGTGGGTA  
501    TTAATATCATGGTACCCAGTTGTACCATCCTCATTCTTATGTTTTTCATT  
551    GTCACTAGCATTCCTTCATATCAAATCCACTCAAGGAAGATCAAAAGCCTT  
601    CAGTACTTGTAGCTCTCATGTCATTGCTCTGTCTCTG

Figure 19

1     CCTTTATAGATCTCTGTTATTCCGTGTGTTTACCCCCAAAATGCTGAAT  
51     GACTTTGTTTCAGAAAGTATCATCTCTTATGTGGGATGTATGACTCAGCT  
101    ATTTTTCTTCTGTTTCTTTGTCAATTCTGAGTGCTATGTGTTGGTATCAA  
151    TGGCCTATGATCGCTATGTGGCCATCTGCAACCCCTGCTCTACATGGTC  
201    ACCATGTCCCCAAGGGTCTGCTTTCTGCTGATGTTTGGTTCCCTATGTGGT  
251    AGGGTTTGCTGGGGCCATGGCCCACACTGGAAGCATGCTGCGACTGACCT  
301    TCTGTGATTCCAACGTCATTGACCATTATCTGTGTGACGTTCTCCCCCTC  
351    TTGCAGCTCTCCTGCACCAGCACCCATGTCAGTGAGCTGGTATTTTTTCAT  
401    TGTGTGTTGGAGTAATCACCATGCTATCCAGCATAAGCATCGTCATCTCTT  
451    ACGCTTTGATACTCTCCAACATCCTCTGTATTCTTCTGCAGAGGGCAGA  
501    TCCAAAGCC

Figure 20

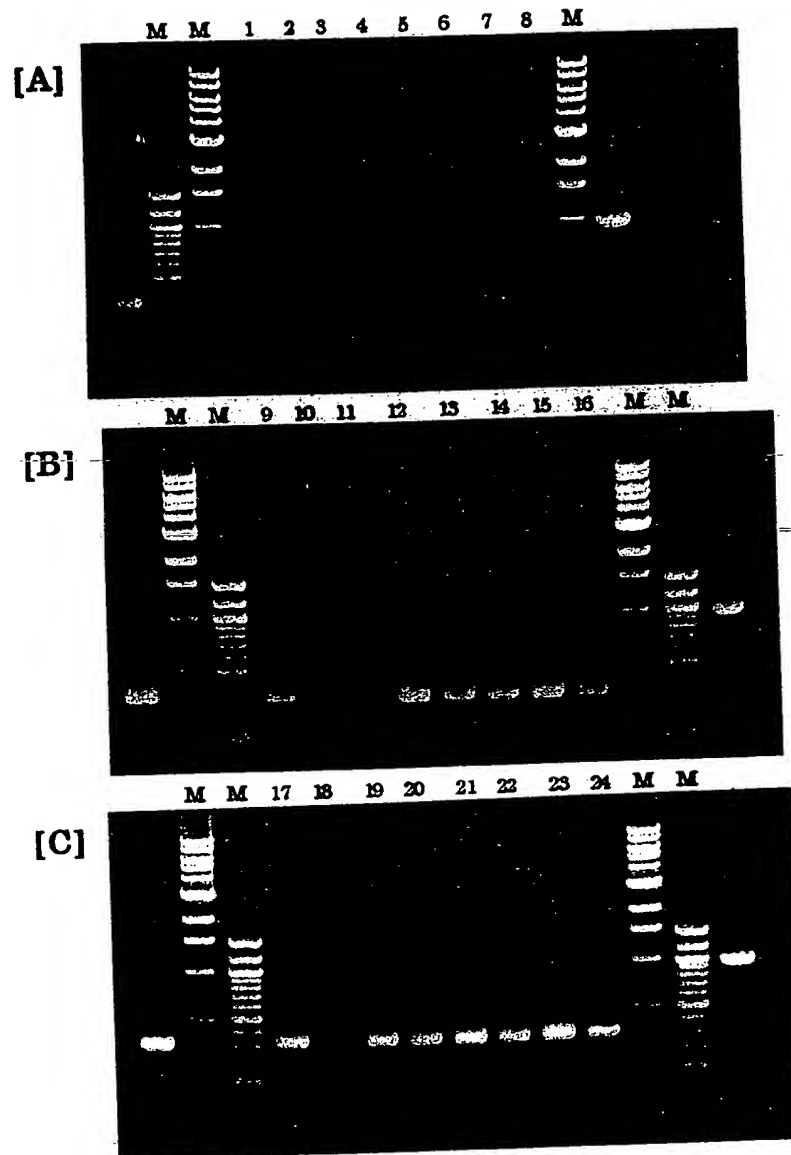


Figure 21

09/807132

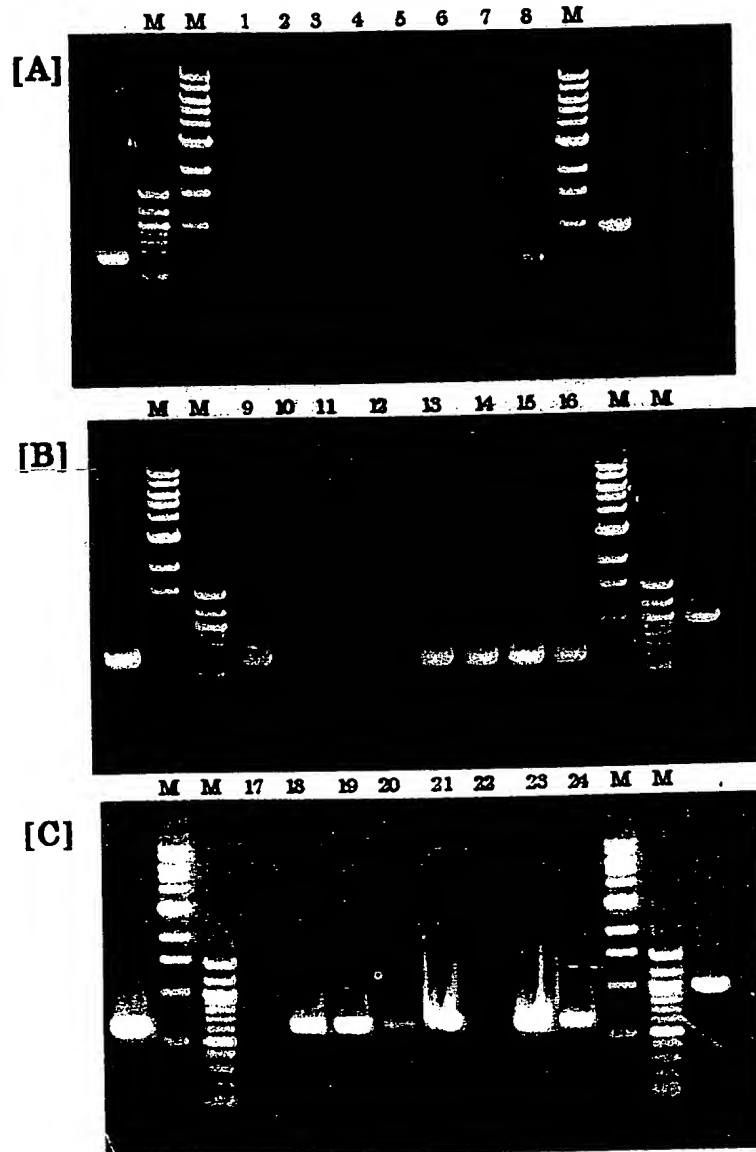


Figure 22

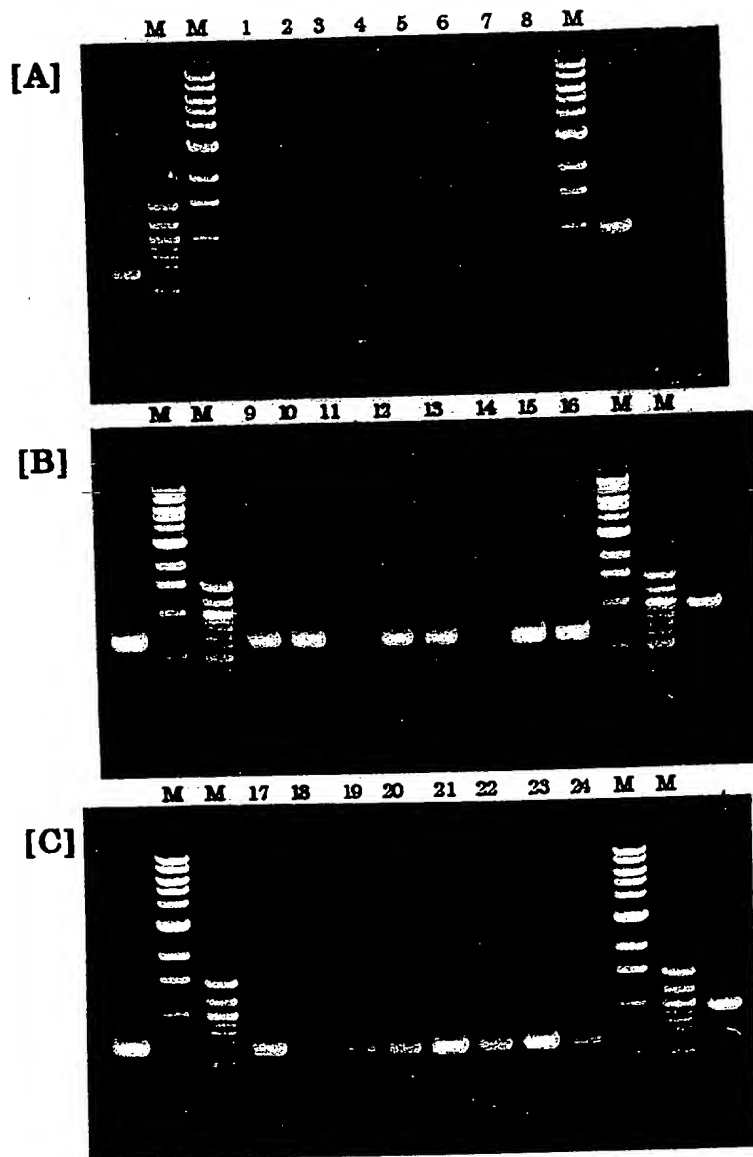


Figure 23

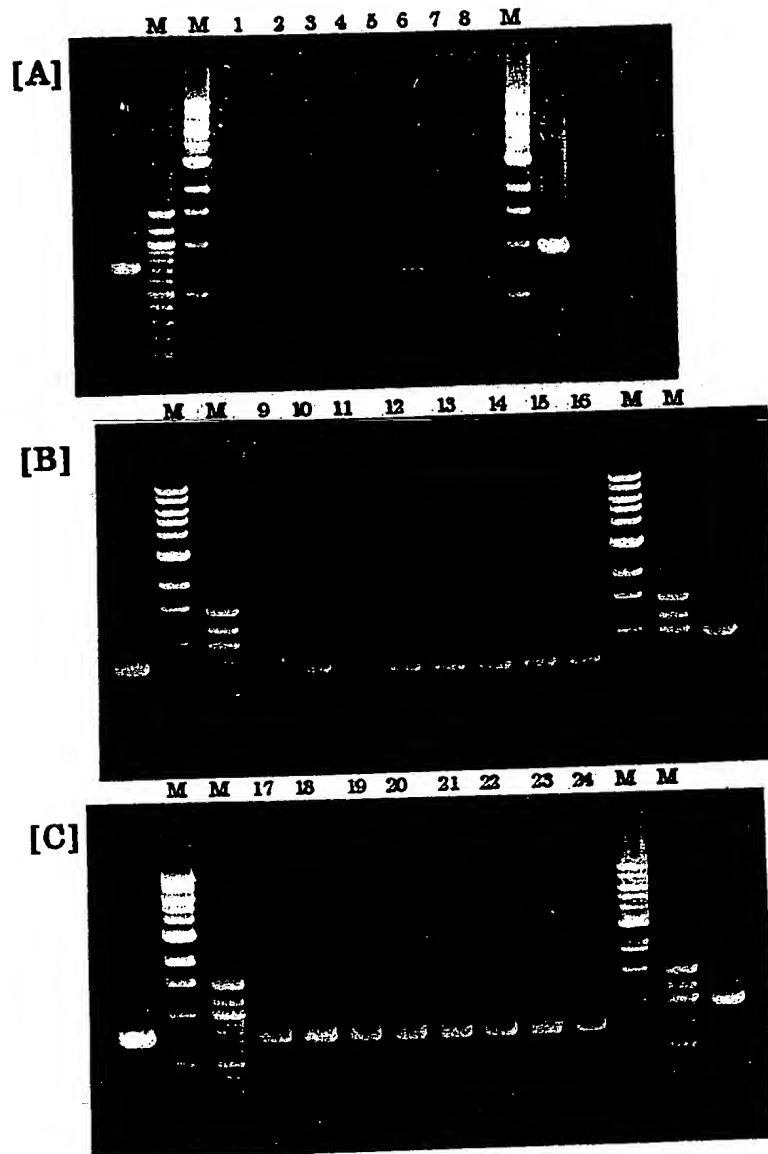


Figure 24

1 AAATGCCTAAAGAAGAATGACCATGGAAAATTATTCTATGGCAGCTCAGTTTGTCTTAGA  
MetThrMetGluAsnTyrSerMetAlaAlaGlnPheValLeuAsp

61 TGGTTTAACACAGCAAGCAGAGCTCCAGCTGCCCCCTCTCCTCCTGTTCTGGGAATCTA  
GlyLeuThrGlnGlnAlaGluLeuGlnLeuProLeuPheLeuLeuPheLeuGlyIleTyr

121 TGTGGTCACAGTAGTGGGCAACCTGGGCATGATTCTCCTGATTGCAGTCAGCCCTCTACT  
ValValThrValValGlyAsnLeuGlyMetIleLeuLeuIleAlaValSerProLeuLeu  
TM-I

181 TCACACCCCATGTACTATTTCTCAGCAGCTTGTCTTCGTCGATTCTGCTATTCTCTC  
HisThrProMetTyrTyrPheLeuSerSerLeuSerPheValAspPheCysTyrSerSer  
TM-II

241 TGTCACTACTCCCAAATGCTGGTGAACCTCCTAGGAAAGAAGATAATCCTTTACTC  
ValIleThrProLysMetLeuValAsnPheLeuGlyLysLysAsnThrIleLeuTyrSer

301 TGAGTGCATGGTCCAGCTCTTTTCTTTGTGGTCTTTGTGGTGGCTGAGGGTTACCTCCT  
GluCysMetValGlnLeuPhePhePheValValPheValValAlaGluGlyTyrLeuLeu  
TM-III

361 GACTGCCATGGCATATGATCGCTATGTTGCCATCTGTAGCCCACTGCTTTATAATGCGAT  
ThrAlaMetAlaTyrAspArgTyrValAlaIleCysSerProLeuLeuTyrAsnAlaIle

421 CATGTCCTCATGGGTCTGCTCACTGCTAGTGCTGGCTGCCTTCTTCTGGGCTTTCTCTC  
MetSerSerTrpValCysSerLeuLeuValLeuAlaAlaPhePheLeuGlyPheLeuSer  
TM-IV

481 TGCCTTGACTCATACAAGTGCCATGATGAACTGTCTTTTGCAAATCCCACATTATCAA  
AlaLeuThrHisThrSerAlaMetMetLysLeuSerPheCysLysSerHisIleIleAsn

541 CCATTACTTCTGTGATGTTCTTCCCTCCTCAATCTCTCCTGCTCCAACACACACCTCAA  
HisTyrPheCysAspValLeuProLeuLeuAsnLeuSerCysSerAsnThrHisLeuAsn

601 TGAGCTTCTACTTTTATCATTGCGGGGTTAACACCTTGGTGCCACCCCTAGCTGTTGC  
GluLeuLeuLeuPheIleIleAlaGlyPheAsnThrLeuValProThrLeuAlaValAla  
TM-V

661 TGTCTCCTATGCCTTCATCCTCTACAGCATCCTTCACATCCGCTCCTCAGAGGGCCGGTC  
ValSerTyrAlaPheIleLeuTyrSerIleLeuHisIleArgSerSerGluGlyArgSer

721 CAAAGCTTTTGAACATGCAGCTCTCATCTCATGGCTGTGGTGATCTTCTTGGGTCCAT  
LysAlaPheGlyThrCysSerSerHisLeuMetAlaValValIlePhePheGlySerIle  
TM-VI

781 TACCTTCATGTATTTCAAGCCCCCTTCAAGTAACTCCCTGGACCAGGAGAAGGTGTCCTC  
ThrPheMetTyrPheLysProProSerSerAsnSerLeuAspGlnGluLysValSerSer

841 TGTGTTCTACACCACGGTGATCCCCATGCTGAACCCCTTTAATATACAGTCTGTAATCACA  
ValPheTyrThrThrValIleProMetLeuAsnProLeuIleTyrSerLeu\*\*\*  
TM-VII

901 GCACTTTGGAAGGCTGAGGCAGGTTGCTTGAGTCCAGTTTGAGACCATCCTGGGGAACA

961 TAGTGCGATCTTGTTTCTTTCCACTGCCTAAAACTTCAATGCTCAATTTTACTTGCAAT

1021 TTCCTCTCCTGACATGGAGAATGTTGGCTTGGAAATGTTT



Figure 25

1     ATTTTGAAGACAAAAATGCTGGCTAGAAACAACCTCCTTAGTGACTGAATTTATTCTTG  
          MetLeuAlaArgAsnAsnSerLeuValThrGluPheIleLeuAla

61     CTGGATTAAACAGATCGTCCAGAGTTCTGGCAACCCTTCTTTTTCCTGTTCTAGTGATCT  
          GlyLeuThrAspArgProGluPheTrpGlnProPhePhePheLeuPheLeuValIleTyr

121     ACATTGTCACCATGGTAGGCAACCTTGGCTTGATCACTCTTTTCGGTCTAAATTCTCACC  
          IleValThrMetValGlyAsnLeuGlyLeuIleThrLeuPheGlyLeuAsnSerHisLeu  
          TM-I

181     TCCACACACCAATGTACTATTTCTCTTCAATCTCTCTTCATTGATCTCTGTTACTCCT  
          HisThrProMetTyrTyrPheLeuPheAsnLeuSerPheIleAspLeuCysTyrSerSer  
          TM-II

241     CTGTTTTCACCTCCAAAATGCTAATGAACTTTGTGTCAAAAAGAATATTATCTCCAATG  
          ValPheThrProLysMetLeuMetAsnPheValSerLysLysAsnIleIleSerAsnVal

301     TTGGGTGCATGACTCGGCTGTTTTCTTCTCTTTTCGTCATCTCTGAATGTTACATGT  
          GlyCysMetThrArgLeuPhePhePheLeuPhePheValIleSerGluCysTyrMetLeu  
          TM-III

361     TGACCTCAATGGCATATGATCGCTATGTGGCCATCTGTAATCCATTGCTGTATAAGGTCA  
          ThrSerMetAlaTyrAspArgTyrValAlaIleCysAsnProLeuLeuTyrLysValThr

421     CCATGTCCCATCAGGTCTGTCTATGCTCACTTTTGCTGCTTACATAATGGGATTGGCTG  
          MetSerHisGlnValCysSerMetLeuThrPheAlaAlaTyrIleMetGlyLeuAlaGly  
          TM-IV

481     GAGCCACGGCCACACCGGTGCATGTTTAGACTCACCTTCTGCAGTGCTAATATCATT  
          AlaThrAlaHisThrGlyCysMetPheArgLeuThrPheCysSerAlaAsnIleIleAsn

541     ACCATTACTTGTGTGACATACTCCCCCTCCTCCAGCTTTCCTGCACCAGCACCTATGTCA  
          HisTyrLeuCysAspIleLeuProLeuLeuGlnLeuSerCysThrSerThrTyrValAsn

601     ACGAGGTGGTTGTCTCATTGTGTGGGTACTAATATCACGGTACCCAGTTGTACCATCC  
          GluValValValLeuIleValValGlyThrAsnIleThrValProSerCysThrIleLeu  
          TM-V

661     TCATTTCTTATGTTTTCATTGTCACTAGCATTCTTCATATCAAATCCACTCAAGGAAGAT  
          IleSerTyrValPheIleValThrSerIleLeuHisIleLysSerThrGlnGlyArgSer

721     CAAAAGCCTTCAGTACTTGTAGCTCTCATGTCTGCTCTGTCTGTGTTTTTGGGTCAG  
          LysAlaPheSerThrCysSerSerHisValIleAlaLeuSerLeuPhePheGlySerAla  
          TM-VI

781     CGGCATTCATGTATATTAAATATTCTTCTGGATCTATGGAGCAGGAAAGTTTTTCTG  
          AlaPheMetTyrIleLysTyrSerSerGlySerMetGluGlnGlyLysValPheSerVal

841     TTTTCTACACTAATGTGGTGCCCATGCTCAATCCCCTCATCTACAGTTTGAGGAACAAGG  
          PheTyrThrAsnValValProMetLeuAsnProLeuIleTyrSerLeuArgAsnLysAsp  
          TM-VII

901     ATGTCAAAGTTGCACTGAGGAAAGCTCTGATTAAAATTCAGAGGAGAAATATATTCTAAT  
          ValLysValAlaLeuArgLysAlaLeuIleLysIleGlnArgArgAsnIlePhe\*\*\*

961     TAGAAGCAGTAATGATGTAAAACAATTGAAGGACTTCAAATTTTTATTAGTGTGTTTTTCAT

1021    GAAGAGATTTTGTGTTTCTACAGATGGTGTTATGTGTGATTTAATAAAA

Figure 26

1 ATTTTGAAGACAAAAATGCTGGCTAGAAACAACCTCCTTAGTGACTGAATTTATTCTTG  
MetLeuAlaArgAsnAsnSerLeuValThrGluPheIleLeuAla

61 CTGGATTAACAGATCGTCCAGAGTCCGGCAACCCCTCTTTTCTGTTTCTAGTGATCT  
GlyLeuThrAspArgProGluPheArgGlnProLeuPhePheLeuPheLeuValIleTyr

121 ACATTGTCACCATGGTAGGCAACCTTGGCTTGATCATTCTTTTCGGTCTAAATTCTCACC  
IleValThrMetValGlyAsnLeuGlyLeuIleIleLeuPheGlyLeuAsnSerHisLeu  
TM-I

181 TCCACACACCAATGTACTATTTCTCTTCAATCTCTCCTTCATTGATCTCTGTTACTCCT  
HisThrProMetTyrTyrPheLeuPheAsnLeuSerPheIleAspLeuCysTyrSerSer  
TM-II

241 CTGTTTTCTACTCCCAAATGCTAATGAACCTTGTATCAAAAAGAATATTATCTCCTATG  
ValPheThrProLysMetLeuMetAsnPheValSerLysLysAsnIleIleSerTyrVal

301 TTGGGTGCATGACTCAGCTGTTTTCTTTCTCTTTTTTGTCTCTCTGAATGCTACATAT  
GlyCysMetThrGlnLeuPhePhePheLeuPhePheValIleSerGluCysTyrIleLeu  
TM-III

361 TGACCTCAATGGCATATGATCGCTATGTGGCCATCTGTAATCCATTGCTGTATAAGGTCA  
ThrSerMetAlaTyrAspArgTyrValAlaIleCysAsnProLeuLeuTyrLysValThr

421 CCATGTCCCATCAGGTCTGTTCTATGCTCACTTTTGCTGCTTACATAATGGGATTGGCTG  
MetSerHisGlnValCysSerMetLeuThrPheAlaAlaTyrIleMetGlyLeuAlaGly  
TM-IV

481 GAGCCACGGCCACACCGGGTGCATGCTTAGACTCACCTTCTGCAGTGCTAATATCATCA  
AlaThrAlaHisThrGlyCysMetLeuArgLeuThrPheCysSerAlaAsnIleIleAsn

541 ACCATTACTTGTGTGACATACTCCCCCTCCTCCAGCTTTCCTGCACCAGCACCTATGTCA  
HisTyrLeuCysAspIleLeuProLeuLeuGlnLeuSerCysThrSerThrTyrValAsn

601 ACGAGGTGGTTGTTCTCATTGTTGTGGGTATTAATATCATGGTACCCAGTTGTACCATCC  
GluValValValLeuIleValValGlyIleAsnIleMetValProSerCysThrIleLeu  
TM-V

661 TCATTCTTATGTTTTTATTGTCAGTACTTCTCATATCAAATCCACTCAAGGAAGAT  
IleSerTyrValPheIleValThrSerIleLeuHisIleLysSerThrGlnGlyArgSer

721 CAAAAGCCTTCAGTACTGTAGCTCTCATGTCTGCTCTGTTTCTGTTTGGGTGAG  
LysAlaPheSerThrCysSerSerHisValIleAlaLeuSerLeuPhePheGlySerAla  
TM-VI

781 CGGCATTGATGATATTAATATTTCTTCTGGATCTATGGAGCAGGAAAAGTTTCTTCTG  
AlaPheMetTyrIleLysTyrSerSerGlySerMetGluGlnGlyLysValSerSerVal

841 TTTTCTACACTAATGTGGTGGCCATGCTCAATCCTCTCATCTACAGTTTGAGGAACAAGG  
PheTyrThrAsnValValProMetLeuAsnProLeuIleTyrSerLeuArgAsnLysAsp  
TM-VII

901 ATGTCAAAGTTGCACTGAGGAAAGCTCTGATTAAAATTCAGAGAAGAAATATATTCTAAT  
ValLysValAlaLeuArgLysAlaLeuIleLysIleGlnArgArgAsnIlePhe\*\*\*

961 TAGAAGCAGTAATAATGTAAAACGATTGAAGAACTTTAAATTTTATTAGTGTGTTCCAT

1021 GAAGAGATTTGTTGTTTCTACAGATGGTGTATGTGTGATTAAATAAA

Figure 27

1 ACAGCTCGCCAAGAGAGAATGACTCTGAGAAACAGCTCCTCAGTGACTGAGTTTATCCTT  
MetThrLeuArgAsnSerSerSerValThrGluPheIleLeu

61 GTGGGATTATCAGAACAGCCAGAGCTCCAGCTCCCTCTTTTCTTCTATTCTTAGGGATC  
ValGlyLeuSerGluGlnProGluLeuGlnLeuProLeuPheLeuLeuPheLeuGlyIle

121 TATGTGTTCACTGTGGTGGGCAACTTGGGCTTGATCACCTTAATTGGGATAAATCCTAGC  
TyrValPheThrValValGlyAsnLeuGlyLeuIleThrLeuIleGlyIleAsnProSer  
TM-I

181 CTTCACACCCCATGTACTTTTCTCTTCAACTTGTCCTTATAGATCTCTGTTATTCC  
LeuHisThrProMetTyrPhePheLeuPheAsnLeuSerPheIleAspLeuCysTyrSer  
TM-II

241 TGTGTGTTTACCCCCAAAATGCTGAATGACTTTGTTTCAGAAAGTATCATCTCTTATGTG  
CysValPheThrProLysMetLeuAsnAspPheValSerGluSerIleIleSerTyrVal

301 GGATGTATGACTCAGCTATTTTCTTCTGTTTCTTTGTCAATTCTGAGTGCTATGTGTTG  
GlyCysMetThrGlnLeuPhePhePheCysPhePheValAsnSerGluCysTyrValLeu  
TM-III

361 GTATCAATGGCCTATGATCGCTATGTGGCCATCTGCAACCCCTGCTCTACATGGTCACC  
ValSerMetAlaTyrAspArgTyrValAlaIleCysAsnProLeuLeuTyrMetValThr

421 ATGTCCCCAAGGTCTGCTTTCTGCTGATGTTGGTTCCTATGTGGTAGGGTTGCTGGG  
MetSerProArgValCysPheLeuLeuMetPheGlySerTyrValValGlyPheAlaGly  
TM-IV

481 GCCATGGCCCACTGGAAGCATGCTGCGACTGACCTTCTGTGATTCCAACGTCATTGAC  
AlaMetAlaHisThrGlySerMetLeuArgLeuThrPheCysAspSerAsnValIleAsp

541 CATTATCTGTGTGACGTTCTCCCCCTCTTGACGCTCTCCTGCACCAGCACCCATGTCACT  
HisTyrLeuCysAspValLeuProLeuLeuGlnLeuSerCysThrSerThrHisValSer

601 GAGCTGGTATTTTTCATTGTTGTTGGAGTAATCACCATGCTATCCAGCATAAGCATCGTC  
GluLeuValPhePheIleValValGlyValIleThrMetLeuSerSerIleSerIleVal  
TM-V

661 ATCTCTTACGCTTTGATACTCTCCAACATCCTCTGTATTCTTCTGCAGAGGGCAGATCC  
IleSerTyrAlaLeuIleLeuSerAsnIleLeuCysIleProSerAlaGluGlyArgSer

721 AAAGCCTTTAGCACATGGGGCTCCACATAATTGCTGTTGCTCTGTTTTTGGGTACAGG  
LysAlaPheSerThrTrpGlySerHisIleIleAlaValAlaLeuPhePheGlySerGly  
TM-VI

781 ACATTACCTACTTAACAACATCTTTCTGCTCTATGAACCATGGCAGATTGCTCA  
ThrPheThrTyrLeuThrThrSerPheProGlySerMetAsnHisGlyArgPheAlaSer

841 GTCTTTTACACCAATGTGGTTCCTGCTTAACCTTCGATCTACAGTTTGAGGAATAAG  
ValPheTyrThrAsnValValProMetLeuAsnProSerIleTyrSerLeuArgAsnLys  
TM-VII

901 GATGATAAACTTGCCCTGGGCAAAACCTGAAGAGAGTGCTCTTCTAATGGGTCTCTTCA  
AspAspLysLeuAlaLeuGlyLysThrLeuLysArgValLeuPhe\*\*\*

961 TATCACTGGCAACCGA

Figure 28

OLF1 MEFTD-RMYT -LVTEFILLG FPTRPELOIV LFLMFLTYA IILIGNIGLM LI RIDPHLO  
 OLF2 M---D---NQS S-TPGFLLLG FSEHPGLGRT LFVDVITSYL LTLVGHTLII LI ALDTKLH  
 OLF3 MG-TD---NQT -WVSEFILLG LSSDWDTRVS LPVLFVMTV VTVLGNCLIV LI RLDSRLH  
 11-1 M--TME-NYS M-AAQFVLDG LTOQAELOLP LFLFLGIYV VTVVGNLGM I LI AVSPLLH  
 \* \* \* \* \* \*\* \* \*\* \*  
 OLF1 TPHYFFLSNL SPVDLCYFSD IVPKMLVNFL SENKSISYYG CALQFYFCT FADTESFILA  
 OLF2 SPHYFFLSNL SFILDLCPPTS CVPOMLANLW GPKKTISFLD CSVQIFIFLS LGTECILMK  
 OLF3 TPHYFFLTNL SLVDVSYATS VVPQLLAHFL AEHKAIPFOS CAAQLFFSLA LGGIEFVLLA  
 11-1 TPHYFFLSSL SPVDFCYSSV ITPKMLVNFL GKKNITILYSE CMVQLFFV FVVAEGYLLT  
 \*\*\* \*\* \* \* \* \* \* \* \* \*  
 OLF1 AMAYDRYVAI CNPLLYTVVM SRGICMRLIV LSYLGGMSS LVHTSFAFIL KYCDKNVINH  
 OLF2 VMAFDRYVAV CQPLHYATII HPRLCWOLAS VAWVIGLVGS VVQTPSTLHL PFCPDROVDD  
 OLF3 VMAFDRYVAV CDALRYSAIM HGGLCARLAI TSWVSGFISS PVQTAITFOL PMCRNKFIDH  
 11-1 AMAYDRYVAI CSPLLYNAM SSWVCSLLVL AAFFLGFLSA LHTTSAMMKL SPCKSHIINH  
 \*\* \* \* \* \* \* \* \* \*  
 OLF1 FFCOLPPLLK LSCTDTTINE WLLSTYGSSV EIICFIIIII SYFFILLSVL KIRSFSGRKK  
 OLF2 FVCEVPALIR LSCEPTSYNE IQVAVASVFI LUVPLSLILV SYGAIWAVL RINSATAWRK  
 OLF3 ISCELLAVVR LACVDTSNE VTIMVSSIVL LMTPLCLVLL SYIQIISTIL KIQSREGRKK  
 11-1 YFCVDVPLLN LSCSNTHLNE LLLFIIAGFN TLVPTLAVAV SYAFILYSIL HIRSEGRSK  
 \* \* \* \* \* \*\* \* \* \* \*  
 OLF1 TFSTCASHLT SVTIYQGTL FLYSRPSYLY SPNTDKIISV FYTIFIPVLN PLIYSLRNKO  
 OLF2 AFGTCSSHLT VVTLFYSSVI AVYLQPKNPY AQGRGKFFGL FYAVGTPLSN PLVYTLRNKE  
 OLF3 APHTCASHLT VVALCYGVAI FTYIQPHSSP SVLQEKLFV FYAILTPMLN PMYSLRNKE  
 11-1 AFGTCSSHLM AVVIFFGSIT FMYFKPPSSN SLDQEKVSSV FYTTVIPMLN PLIYSL----  
 \* \* \* \* \* \* \* \* \* \*  
 OLF1 VKDAAEKVLR SKVDS--S  
 OLF2 IKRALRRLLG KERDSRESWR AA  
 OLF3 VKGAWQKLLW KFSG-LTSKL AT  
 11-1 -----

Figure 29

OLF2 M---DNQ SSTPGFLLG FSEHPGLGRT LFVDVITSYL LTLVGNTLII LLSALDTKLH  
 OLF3 MGT-DNQ THVSEFILLG LSSDWDTRVS LFVFLVMYV VTVLGNCLIV LLIRLDSRLH  
 11-2 MLAR-NN SLVTEFILAG LTDRPEFWQP FFFLFLVIYI VTHVGNLGLI TLFGLNSHLH  
 \* \* \* \* \* \* \* \* \* \*  
 OLF2 SPHYFFLSNL SFLDLCFTTS CVPQMLANLW GPKKTISPLD CSVQIFIFLS LGTTECILMK  
 OLF3 TPHYFFLTNL SLVDVSYATS VVPQLLAHFL AEHKAIPFQS CAAQLFFSLA LGGIEFVLLA  
 11-2 TPHYFFLFNL SFIDL CYSSV FTPKMLMNFV SKKNIISNVG CHTRLFFFLF FVISECYMLT  
 \*\*\* \*\* \* \* \* \* \* \* \* \* \* \*  
 OLF2 VMAFD~~RY~~VAV CQPLHYATII HPRLCWQLAS VAWVIGLVGS VVQTPSTLHL PFC~~PD~~RQVDD  
 OLF3 VMAYD~~RY~~VAV CDALRYSAIM HGGLCARLAI TSWVSCFISS PVQTAITFQL PMCRNKFIDH  
 11-2 SHAYD~~RY~~VAI CNPLLYKVTM SHQVCSMLTF AAYIMGLAGA TAHTGCMFRL TFCSANIINH  
 \*\* \*\*\*\*\* \* \* \* \* \* \* \* \* \* \*  
 OLF2 FVCEVPALIR LSCE~~DT~~SYNE IQVAVASVFI LVVPLSLILV SYGAITWAVL RINSATAWRK  
 OLF3 ISCELLAVVR LA~~CV~~DTSSNE VTINVSSIVL LMTPLCLVLL SYIQIISTIL KIQSREGKK  
 11-2 YL~~CD~~ILPLLQ LS~~CT~~STYVNE VVVLIVVGTN ITVPSTILI SYVFIVTSIL HIKSTQGRSK  
 \* \* \* \* \* \* \* \* \* \*  
 OLF2 AFGTCSSHLT VVTLFYSSVI AVYLQPKNPY AQGRGKFFGL FYAVGTPSLN PLVYTLRNKE  
 OLF3 AFHTCASHLT VVALCYGVAI FTYIQPHSSP SVLQEKLFVS FYAILTPMLN PMIYSLRNKE  
 11-2 AFSTCSSHVI ALSLFFGSAA FMYIKY-SSG SMEQGVFSV FYTNVVPMLN PLIYSLRNKD  
 \*\* \*\* \* \* \* \* \* \* \* \* \* \*  
 OLF2 IKRALRRLG KERDSRESWR AA  
 OLF3 VKGAWQKLLW KFSGL-TSKL AT  
 11-2 VKVALRKALI KIQ-RRN--I -F  
 \* \* \* \*

Figure 30

OLF2 M---DNQ SSTPGFLLG FSEHPGLGRT LFVDVITSYL LTLVGNTLII LLSALDTKLH  
 OLF3 MGT-DNQ TWSEFILLG LSSDWDTRVS LFVLPLVMYV VTVLGNCLIV LLIRLDSRLH  
 11-3 MLAR-NN SLVTEFILAG LTRPEPRQP LFPLFLVIYI VTMVGNLGLI ILFGLNSHLH  
 \* \* \* \* \*  
 OLF2 SPMYFFLSNL SFLDLCFTTS CVPQMLANLW GPKKTISFLD CSVQIFIFLS LGTTECILMK  
 OLF3 TPMYFFLTNL SLVDVSYATS VVPQLLAHFL AEHKAIPFQS CAAQLFFSLA LGGIEFVLLA  
 11-3 TPMYFFLFNL SFIDLCYSSV FTPKMLMNFV SKKNIISYVG CMTQLFFFLP FVISECYILT  
 \*\*\* \*\* \* \* \* \* \*  
 OLF2 VMAFDRYVAV CQPLHYATII HPRLCWQLAS VAWVIGLVGS VVQTPSTLHL PFCPDRQVDD  
 OLF3 VMAYDRYVAV CDALRYSAIN HGGLCARLAI TSWVSGFISS PVQTAITFQL PMCENKFIIDH  
 11-3 SMAYDRYVAI CNPLLYKVTH SHQVCSMLTF AAYIMLAGA TAHTGCMLRL TFCSANIINH  
 \*\* \*\*\*\*\* \* \* \* \* \*  
 OLF2 FVCEVPALIR LSCEDTSYNE IQVAVASVFI LVVPLSLILV SYGAIWAVL RINSATAWEK  
 OLF3 ISCELLAVVR LACVDTSNE VTIMVSSIVL LMTPLCLVLL SYIQIISTIL KIQSREGRKK  
 11-3 YLCDILPLLQ LSCSTSYVNE VVVLIVVGIN IMVPSCTILI SYVFIVTSIL HIKSTQGRSK  
 \* \* \* \* \*  
 OLF2 AFGTCSSHLT VVTLFYSSVI AVYLQPKNPY AQGRGKFFGL FYAVGTPSLN PLVYTLRNKE  
 OLF3 AFHTCASHLT VVALCYGVAI FTYIQPHSSP SVLQEKLFVS FYAILTPMLN PMIYSLRNKE  
 11-3 AFSTCSSHVI ALSLFFGSAA FMYIKY-SSG SMEQGVVSSV FYTNVVPMLN PLIYSLRNKD  
 \*\* \*\* \* \* \* \* \*  
 OLF2 IKRALRRLG KERDSRESWR AA  
 OLF3 VKGAWQKLLW KFSGL-TSKL AT  
 11-3 VKVALRKALI KIQ-RRN--I -F  
 \* \* \* \*

Figure 31

OLF2 M---DNQ SSTPGFLLG FSEHPGLGRT LFVDVITSYL LTLVGNTLII LLSALDTKLH  
 OLF3 MGT-DNQ TWVSEFILLG LSSDWDTRVS LFVFLVMYV VTVLGNCLIV LLIRLDSRLH  
 11-4 MTLR-NS SSVTEFILVG LSEQPELQLP LFLFLGIYV FTVVGNLGLI TLIGINPSLH  
 \* \* \* \* \* \*\* \* \* \* \*  
 OLF2 SPMYFFLSNL SFLDLCFTTS CVPQMLANLW GPKKTISFLD CSVQIFIFLS LGTTECILMK  
 OLF3 TPMYFFLTNL SLVDVSYATS VVPQLLAHFL AEHKAIPFQS CAAQLFFSLA LGGIEFVLLA  
 11-4 TPMYFFLFNL SFIDLCSYCV PTPKMLNDFV SES-IISYVG CMTQLFFFCF FVNSECYVLV  
 \*\*\*\*\* \* \* \* \* \*  
 OLF2 VMAYDREYVAV CQPLHYATII HPRLCWQLAS VAWVIGLVGS VVQTPSTLHL PFCPDRQVDD  
 OLF3 VMAYDREYVAV CDALRYSAIN HGGLCARLAI TSWVSGFISS PVQTAITFQL PHCRNKFIDH  
 11-4 SMAYDREYVAI CNPLLYMVTM SPRVCFLLMF GSYVVGFAA MAHTGSMRLR TFCDSNVIDH  
 \*\* \*\*\*\*\* \* \* \* \* \*  
 OLF2 FVCEVPALIR LSCEDTSYNE IQVAVASVFI LVPVLSLILV SYGAITWAVL RINSATAWRK  
 OLF3 ISCELLAVVR LACVDTSSNE VTINVSSIVL LMTPLCLVLL SYIQIISTIL KIQSREGRKK  
 11-4 YLCDVLPLLQ LSCTSTHVSE LVFFIVVGVI TMLSSISIVI SYALILSNIL CIPSAEGRSK  
 \* \* \* \* \* \*\* \* \* \*  
 OLF2 AFGTCSSHLT VVTLFYSSVI AVYLQPKNPY AQGRGKFFGL FYAVGTPSLN PLVYTLRNKE  
 OLF3 AFHTCASHLT VVALCYGVAI FTYIQPHSSP SVLQEKLFVS FYAILTPMLN PHIYSLRNKE  
 11-4 AFSTWGSIII AVALFFGSGT FTYLTTSFPG SMNHGRFASV FYTNVVPMLN PSYISLRNKD  
 \*\* \* \* \* \* \*  
 OLF2 IKRALRRLLG KERDSRESWR AA  
 OLF3 VKGAWQKLLW KPSGL-TSKL AT  
 11-4 DKLALGKTL- K----R--VL -F  
 \* \* \* \*